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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/537,092

06/02/2005

Masashi Ichikawa

ISH-0233

8513

23353

7590

12/12/2006

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EXAMINER

ULLAH, ELIAS

ART UNIT

PAPER NUMBER

2812

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/537,092	Applicant(s) ICHIKAWA ET AL.	
	Examiner Elias Ullah	Art Unit 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6-2-2005</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This Office action is in response to application filed on 6-2-2005.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Akiyama et al. (US 2003-0020096).
2. With regard to claims 1-2, Akiyama et al. shows a method for manufacturing an SOI wafer (abstract) comprising the steps of: forming an insulating layer on at least one wafer (Fig. 1b, 3,5) or two starting wafers; and adhering the one wafer to the other wafer without an adhesive [0101], wherein there is used as the starting wafer having no line defect on a surface thereof [0093]; wherein the starting wafer is subject to high temperature heat treatment in advance [0093-0094].
3. With regard to claim 3, Akiyama et al. shows the method wherein the high temperature heat treatment is carried out at a high temperature of 110 oC or higher [0093].
4. With regard to claim 4, Akiyama et al. shows wherein the method comprises the steps of: forming an insulating layer on at least one wafer of the two starting wafers;

Art Unit: 2812

implanting hydrogen ions or rare gas ions through the upper surface of the one wafer to form a micro bubble layer in the interior of the one wafer, thereafter bringing the surface of the one wafer through which the ions have been implanted into close contact with the other wafer through the insulating layer interposed there between [0103]; then delaminating a part of the one wafer with the micro-bubble layer as a cleavage plane by applying heat treatment for the rest thereof to become a thin film [0106]; and bonding strongly the one wafer in the form of a thin film to the other wafer through the insulating layer interposed there between by applying further heat treatment [0107].

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama et al. in view of Iwabuchi (2002/01550630).

7. With regard to claims 5-6, Akiyama et al. shows surface defects of wafers but fails to expressly disclose line defect inspection is carried out with a laser microscope with a confocal optical system. However, Iwabuchi does teach a method with which to be used as the starting wafer of the SOI wafer are inspected with respect to a line defect to sort line defect free wafers for use and wherein the inspection of the line defect is carried out with a laser microscope with a confocal optical system [0023]. In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention

Art Unit: 2812

was made to perform line defects inspection of Akiyama's et al. method because laser microscope method is a non-destructive method of finding a defect.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Ullah whose telephone number is 571-272-1415. The examiner can normally be reached on 8-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL LEBENTRITT can be reached on (571)272-1873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SCOTT B. GEYER  
PRIMARY EXAMINER

E. Ullah  
12/6/2006.

*SB. H*

*12/8/06*